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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,954	06/20/2003	Huijun Zhao	27,037 USA	9492

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EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT	PAPER NUMBER
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2643

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,954

Applicant(s)

ZHAO, HUIJUN

Examiner

Phylesha L Dabney

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This action is in response to the application filed on 20 June 2003 in which claims 1-15 are pending.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe (U.S. Patent No. 6,735,322).

Regarding claims 1 and 8, Watanabe teaches a high power loudspeaker having double symmetric magnet-circuits, double voice coils and double dampers comprises: a diaphragm holder (21, 36), a diaphragm (34), an upper and a lower dampers (26-27), an annular magnet (22-23), a core (31-33), voice coils (28-29), an upper and a lower plate (22, 24), the faces of the upper and lower ends of the annular steel magnet are fixed to the upper and lower plates respectively, the upper and lower plates have a hole in their center respectively, the core is inserted into the holes of the upper and lower plates and into the hollow section of the annular steel magnet, with an upper annular magnet gap formed between the periphery of the upper section of the core and the upper plate as well as an annular lower magnet gap formed between the core and the lower plate, the voice coil that wraps around the core comprises a cylindrical bobbin (25) and an upper and a lower coil, with the upper end of the bobbin fixed to the

Art Unit: 2643

diaphragm and the upper and lower coil wound around the bobbin, being situated within the upper and lower magnet gap; respectively; the periphery of the diaphragm (34) is fixed to the edge of the diaphragm holder (21, 36); the inner edge of the upper damper is fixed to the outer wall of the upper section of the bobbin, and its outer edge is fixed to the diaphragm holder; the periphery of the lower end of the bobbin is fixed to the lower damper, characterized in that the core (32) is a magnet,

the polarities of its upper and lower ends being opposite to those of the upper and lower ends of the annular steel magnet. Watanabe does not specifically teach the any particular type of material used for the magnetic material (22-23, 32). However, the examiner takes official notice that it is known to use steel, iron, cobalt, nickel, and many other magnetizable metals in combination to achieve different magnetic field strengths, densities within electromagnetic loudspeaker systems. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use any of the known magnetic materials, such as steel, in the invention of Watanabe for achieving the desired magnetic field strength in the electromagnetic loudspeaker system

Regarding claim 2, Watanabe teaches the core (32) is supported by a core holder (30) which includes a central cylindrical protrusion which projects into the lower section of the voice coil to be fixed to the lower end of the core and an annular collar around.

Regarding claim 3, Watanabe teaches the outer edge of the lower damper (27) fixed to a lower diaphragm holder (21, 36) that comprises an annular upper end face which is fixed to the lower plate and a horn-shaped side which lower edge is fixed to the annular collar of the core holder (30).

Regarding claims 4-5 and 7, Watanabe teaches the core (32) comprises an upper magnet-conducting block (33), a core steel magnet (32, relative to the 103 rejection of claim 1) and a lower magnet-conducting block (31), these three are stuck together in turn, with the upper magnet-conducting block facing the upper plate to form an upper magnet gap, the lower magnet-conducting block facing the lower plate to form the lower magnet gap, and the diameter of the core steel magnet being a little smaller than that of the upper and lower magnet-conducting blocks.

Regarding claims 6 and 14, Watanabe does not teach the diaphragm holder comprises an upper chassis and a lower chassis, the upper and lower chassis are fixed together by screws. However, the examiner takes official notice that it is known to make the diaphragm holder in parts so that the internal components are easier to access. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the diaphragm holder as an integral piece or as separable pieces fixable together via fasteners, such as glue, screws, etc., for easy of access to the internal components.

Regarding claims 9-13 and 15, see the rejections above for claims 1-5 and 7 respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-4 PM.

Art Unit: 2643

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 6, 2004

PLD


CURTIS KUNTZ
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